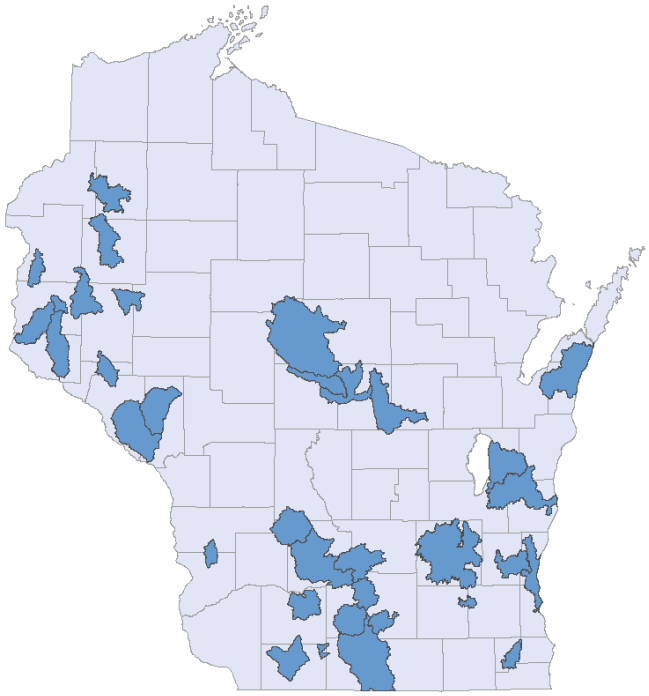
Tracking Conservation Outcomes of the Producer-Led Watershed Protection Grants Program

2019 No-Till and Cover Crop Analysis

Project Overview

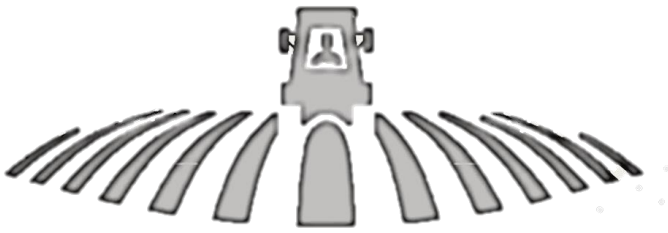
DATCP initiated a project in late 2019 to track the conservation outcomes generated by Producer-Led watershed projects. The quantifiable benefits of conservation practices remain challenging to estimate on a large scale.

However, using Wisconsin's nutrient management planning software, SnapPlus, potential reductions in phosphorus runoff and soil erosion were estimated for reported cover crop and no-till acres as part of the first stage in capturing the impact of this state conservation program on Wisconsin's soil and water resources.



Model Assumptions

- Dominant soil types for each watershed
- County average soil test P-levels (dominant county within watershed project boundary)
- No-till and cover crop acres reported by each group
- Baseline, cover crop, and no-till rotation scenarios



Analysis of Practice Changes

No till Practice Change

- Baseline: Corn- soybean rotation, chisel + disk, no cover crop
- Practice change: No-till soybean crop

Cover crop Practice Change

- Baseline: Corn- soybean rotation, chisel + disk, no cover crop
- Practice change: Rye cover crop after soybeans

Did you know?

One pound of phosphorus that reaches a stream or lake can potentially feed 500 pounds of algae. Excessive algae in surface water can cause algal blooms and result in impaired water quality.

No- Till Summary

2019 Reported No-till Statistics:

- **66,252 acres**
- **235 farms**

Estimated reductions from no-till acres:

- Sediment:
  - Average reduction: **1.1 t/ac/yr**
  - Average percent reduction: **25.9%**
  - Tons erosion reduced: **31,850**
- Phosphorus:
  - Average reduction: **0.6 lb/ac/yr**
  - Average percent reduction: **20.9%**
  - Pounds P reduced: **35,886 lbs P**

Cover Crop Summary

2019 Reported Cover Crop Statistics:

- **99,925 acres**
- **570 farms**

Estimated reductions from cover crop acres:

- Sediment:
  - Average reduction: **0.8 t/ac/yr**
  - Average percent reduction: **19.5%**
  - Tons erosion reduced: **39,609**
- Phosphorus:
  - Average reduction: **0.6 lb/ac/yr**
  - Average percent reduction: **16.1%**
  - Pounds P reduced: **25,506 lbs P**

Did you know?

A soil loss of 100 tons is close in volume to the equivalent of 10 standard dump truck loads of soil.